This seminar will cover topics related to 3D printing. The field of 3D printers has been around for several decades but in recent years it is gaining much momentum with technological capabilities in diverse fields from food, through medicine, and of course engineering.

This seminar will take a critical look at the software tools that support 3D printing, the printing hardware, and the directions that this field is facing today and where it aims to go in a few years. Will cover issues such as preparation of geometric models and their correction for three-dimensional printing, scan conversion algorithms, construction and design of 3D support, stability, production techniques, and unique geometric structures such as porous objects (to be determined).
minimize weight) and objects with graded (varying) material, including continuous control of physical properties, and analysis and optimization of 3D printing artifacts.

The topics in the seminar will be chosen from a proposed group of articles (on the website) or article(s) proposed by the students' and in coordination with the lecturer. Registration for the course is conditional on the selection of a topic for presentation and the approval of the choice by the lecturer. The presenter(s) of a particular article should review the article itself in a self-critical view while presenting the difference and innovations in relation to previous and past articles. In addition, students should look for newer articles that address the topic and the present and review them briefly as well.

The course will include introductory meetings at the beginning of the semester to introduce the field as a whole, the various topics, and initial instruction. The rest of the sessions will include presentations by students scheduled for one lesson (50 minutes). Students are asked to contact the lecturer as early as possible to coordinate the chosen topic of the lecture.

**Prerequisite**: A three-dimensional course is preferred, such as a computer graphics course or an image processing course.

The final grade will be determined (mainly) on the basis of the presentation given by the student, a mini-project of geometric design that will be printed on a 3D printer, and also participation.

The suggested list of articles is here while, as stated, you are welcome to look for newer articles citing the above articles. You are also welcome to propose articles that are not on the list. In principle, an article will not be displayed by more than one student and articles will be marked as selected once approved (by the lecturer).

תוצרי לימוד

See above.

דרישות קורסים

See above.

רישומי ספרים

None – only academic publications.